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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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7590

05/05/2004

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EXAMINER

PHILPOTT, JUSTIN M

ART UNIT

PAPER NUMBER

2665

10

DATE MAILED: 05/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/558,974

Applicant(s)

VAISANEN ET AL.

Examiner

Justin M Philpott

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claim 10 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 2, 3, 5, 6, 10-20 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,272,322 to Su.

Regarding claims 10 and 15-17, Su teaches in a WLAN having a first WLAN device (e.g., mobile unit 101 in FIG. 1) and at least a second WLAN device (e.g., mobile unit 102, see also col. 4, lines 30-34 wherein mobile units may comprise wireless local area network devices), each capable of communicating WLAN data, an improvement of apparatus for selectably connecting the first WLAN device and the second WLAN device, the apparatus comprising: a variable attenuator (e.g., step attenuator P1) having a first port connectable to the first WLAN device (e.g., transceiver 301 is inherently coupled to mobile unit 101, see also FIG. 2A wherein P is coupled to "T") and a second port (e.g., antenna 213) connectable to the second WLAN

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device (e.g., at the antenna of mobile unit 102 for wireless communications), a first WLAN device-generated signal (e.g., see col. 5, lines 35-42, wherein transceiver 301 transmits a signal at power P_{t1}) selectably applied to the first port when the first port is connected to the first WLAN device, the variable attenuator (e.g., step attenuator P1) for attenuating the first WLAN device-generated signal at a selected attenuation level (e.g., attenuating the signal by an additional amount in accordance with a received signal, see col. 5, line 66 – col. 8, line 17) and for providing an attenuated signal at the second port thereof (e.g., transmitting attenuated signals between the mobile units once the path loss is determined and step attenuators P1 and P2 are adjusted accordingly, see col. 4, lines 20-29; col. 6, lines 10-49; and col. 7, line 46 – col. 8, line 7). Further, Su teaches a test controller (e.g., comprising processing logic, see FIG. 4 and col. 5, line 29 – col. 6, line 64) coupled to the variable attenuator (e.g., see col. 6, lines 45-49 regarding power level calibration) and to the WLAN devices (e.g., see col. 5, lines 33-35 regarding loop back test for each transceiver) for selecting the selected attenuation level of the variable attenuator and for selecting parameters of the first WLAN device-generated signal (e.g., see col. 6, lines 45-49 regarding setting the power level calibration, transmit path gains and receive path gains), whereby the WLAN devices form a device under test and a control-device. Further, regarding claim 16, Su teaches calibrating the second WLAN device to the first WLAN responsive to values of the first WLAN device-generated signal provided during the operation of providing (e.g., see Equation 4 in col. 6, line 16). Further, regarding claim 17, Su teaches measuring performance of a selected one of the first WLAN device and the second WLAN device responsive to values of the first WLAN device-generated signal subsequent to delivery to

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the second WLAN device (e.g., via received power values, Pr1 and Pr2, see col. 5, line 55 – col. 6, line 49).

Regarding claim 2, Su teaches attenuation is performed via a resistor network (e.g., see col. 4, lines 51-52) which inherently comprises a plurality of resistive elements of different resistive values.

Regarding claim 3, Su teaches a first WLAN-device calibrator element (e.g., within 201-207 and “T” comprising mixer 211, see FIG. 2A) causes the first WLAN device to generate the first WLAN device-generated signal (e.g., see col. 4, lines 55-62).

Regarding claim 5, Su teaches a second WLAN-device calibrator element (e.g., within 201-207 and “T” comprising mixer comparable to mixer 211 but at the second mobile unit 102) is located at the second WLAN device for controlling operation of the variable attenuator (e.g., step attenuator P1) to select the attenuation level (e.g., see col. 6, line 10 – col. 8, line 17, whereby the power transmitted by mobile unit 102, Pt2, affects the attenuation selection of P1).

Regarding claim 6, Su teaches the second WLAN-device calibrator element (e.g., within 201-207 and “T” at mobile unit 102) is further for measuring values of the attenuated signal (e.g., see col. 5, lines 29-32, wherein gain calibration may be performed via the hardware of FIGS. 2A/2B, software or combination of both) formed by the variable attenuator (e.g., step attenuator P1) and applied to the second WLAN device when the second WLAN device is connected to the second port (e.g., signals coupled via antennas) of the variable attenuator.

Regarding claim 11, Su teaches the second WLAN device (e.g., mobile unit 102) is connected (e.g., at the antenna of mobile unit 102 for wireless communications) to the second port (e.g., antenna 213) of the variable attenuator and the second WLAN device (e.g., mobile

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unit 102) measures values of the attenuated signal formed by the variable attenuator (e.g., see col. 5, lines 35-42).

Regarding claim 12, Su teaches the test controller (e.g., comprising processing logic of FIG. 4) is coupled to the second WLAN device (e.g., mobile 102) wherein the second WLAN device (e.g., mobile 102) forwards measured values of the attenuated signal to the test controller (e.g., see col. 5, line 55 – col. 6, line 49, wherein after the loop back tests are performed by the transceivers, the processing logic utilizes the results to perform the steps of processing logic in FIG. 4).

Regarding claim 13, Su teaches the test controller (e.g., comprising processing logic of FIG. 4) is operable to analyze operation of the first WLAN device (e.g., see col. 5, line 66 – col. 6, line 44 regarding processing logic determining path loss by utilizing signals received by the first mobile unit transceiver) in response to forwarded measured values by the second WLAN device (e.g., via transceiver of second mobile unit 102).

Regarding claim 14, Su teaches the parameters of the signal selected comprise a desired transmit power level (e.g., see col. 5, lines 33-42), a transmission frequency (e.g., see col. 9, lines 34-45), and a data rate (e.g., see col. 1, lines 36-40).

Regarding claims 18 and 19, Su teaches the first and second WLAN devices (e.g., mobile units 101 and 102) form a device under test and a control device of known characteristics for each other, and measuring transmit and receive performances of both devices (e.g., see col. 8, lines 8-17 regarding each unit continuously sensing power).

Regarding claim 20, Su teaches selectably attenuating is performed by a variable attenuator (e.g., step attenuator P1).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4 and 7-9 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Su.

Regarding claim 4, Su teaches the apparatus discussed above regarding claim 3 and further, while Su may not specifically disclose that the first WLAN communicates specifically by using a PCCARD, Examiner takes official notice that it is well known in the art for WLAN communications to be performed by using a PCCARD.

Regarding claim 7, Su teaches the apparatus discussed above regarding claim 6 and further, while Su may not specifically disclose the received measured power values comprise specifically RSSI (received signal strength indication) values, Examiner takes official notice that it is well known in the art for received measured power values to comprise RSSI values and also Applicant admits measurements comprising RSSI values are well known in the art (page 3, lines 1-26).

Regarding claim 8, Su teaches the apparatus discussed above regarding claim 6 and further, while Su may not specifically disclose that the second WLAN communicates specifically by using a PCCARD, Examiner takes official notice that it is well known in the art for WLAN communications to be performed by using a PCCARD. Also, Su teaches the second WLAN-

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device calibrator element (e.g., within 201-207 and "T" at mobile unit 102) is further for forming a connection function (e.g., established power levels with respect to a set path loss, see col. 8, lines 8-17) responsive to measured values of the attenuated signal formed by the variable attenuator (e.g., step attenuator P1) at the selected attenuation level.

Regarding claim 9, Su teaches the second WLAN-device calibrator element selects the selected attenuator level of the variable attenuator to be of successively-different levels (e.g., variable attenuator P1 is a step attenuator which implies the attenuator to be of successively different levels), measures the attenuated signal formed at the second port (e.g., at antenna of 101) attenuated at the successively-different levels, and forms the connection function response thereto (e.g., establishes a power level with respect to a set path loss, see col. 8, lines 8-17).

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin M Philpott whose telephone number is 703.305.7357. The examiner can normally be reached on M-F, 9:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D Vu can be reached on 703.308.6602. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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